

Amendment to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A method of treating a vulnerable plaque associated with a blood vessel of a patient, the method comprising:

providing at least one gene therapy agent encoding at least one protein;

administering the gene therapy agent to a target cell population;

expressing the protein within the patient from a portion of the target cell population; and

modifying the vulnerable plaque as a result of the protein expression,

wherein the gene therapy agent comprises a vector selected from a group consisting of a plasmid, retrovirus vectors, adenovirus vectors, Herpes Simplex vectors, Semliki Forest Virus vectors, and Sindbis virus vectors and the at least one protein is chosen from a group consisting of a collagen isoform, an A1 apolipoprotein isoform and an A1 apolipoprotein mutant Milano isoform.

Claim 2 (original): The method of claim 1 wherein the gene therapy agent comprises a polynucleic acid selected from a group consisting of deoxyribonucleic acid and ribonucleic acid.

Claim 3 (cancelled)

Claim 4 (cancelled)

Claim 5 (original): The method of claim 1 wherein the gene therapy agent is administered *in vivo* the patient.

Claim 6 (original): The method of claim 5 wherein the *in vivo* gene therapy is administered with a balloon catheter device.

Claim 7 (original): The method of claim 5 wherein the *in vivo* gene therapy comprises stenting the blood vessel adjacent the vulnerable plaque.

Claim 8 (cancelled)

Claim 9 (currently amended): The method of claims 1 wherein the gene therapy agent is administered to the target cell population ex vivo the patient.

Claim 10 (currently amended): The method of claim 9 further comprising:
harvesting [[the]] a cell population from the patient;
selecting from the harvested cell population [[for]] the portion of target cells capable of expressing the protein subsequent the administration of the gene therapy agent; and administering the selected cells into the patient.

Claim 11 to Claim 14 (cancelled)

Claim 15 (currently amended): The method of claim 1 wherein the target cell population comprises ~~cells selected from a group consisting of muscle cells, vascular cells, hepatic cells, harvested patient cells, and donor cells.~~

Claim 16 (original): The method of claim 1 wherein expressing the protein comprises secreting the protein into a bloodstream.

Claim 17 (original): The method of claim 1 wherein expressing the protein comprises localized expression adjacent the vulnerable plaque.

Claim 18 (original): The method of claim 1 wherein expressing the protein comprises modulating expression level with an expression cassette.

Claim 19 (original): The method of claim 1 wherein modifying the vulnerable plaque comprises a modification selected from a group consisting of fibrous cap reinforcement, reduction of lipid pool size, modifying a lipid pool constitution, modifying an inflammation response, preventing vulnerable plaque formation, and preventing vulnerable plaque enlargement.

Claim 20 to Claim 28 (cancelled)

Claim 29 (New): The method of claim 5 wherein the gene therapy agent administration comprises at least one technique selected from a group consisting of injection, direct uptake, receptor-mediated uptake and intravenous administration.

Claim 30 (New): The method of claim 9 wherein the gene therapy agent is administered to the target cell population by at least one technique selected from a group consisting of injection, direct uptake, receptor-mediated uptake, electroporation, and precipitation.

Claim 31 (New): The method of claim 10 wherein administering the selected cells into the patient comprises a method chosen from the group consisting of injection and implantation.

Claim 32 (New): The method of claim 31 wherein the selected cells are administered to the patient by implanting a stent seeded with the selected cells adjacent the vulnerable plaque.

Claim 33 (New): The method of claim 31 wherein the selected cells are administered to the patient by implanting a vascular graft seeded with the selected cells adjacent the vulnerable plaque.